



Australian Government

NATIONAL CARBON OFFSET STANDARD

VERSION 3.0

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1. INTRODUCTION

1.1. Opportunities for Carbon Neutrality in Australia

The Australian Government is committed to working in partnership with industry to reduce greenhouse gas emissions and recognises that many businesses also want to take their own initiative to act on climate change.

The **National Carbon Offset Standard** ('the Standard') provides a benchmark for businesses and other organisations voluntarily seeking to be carbon neutral for their operations, products, services or events. The Standard sets out requirements for achieving carbon neutrality, based on a rigorous and transparent framework that is based on relevant international standards and tailored to the Australian context.

Australian businesses and other organisations have the opportunity to utilise the Standard for their own assessment and self-declaration of carbon neutrality. Businesses that wish to have their carbon neutral status certified and recognised may also consider participating in the Carbon Neutral Program.

The Carbon Neutral Program is administered by the Australian Government Department of the Environment. The Department assesses claims of carbon neutrality and provides certified organisations, products, services or events with access to the National Carbon Offset Standard certification trade mark. The certification trade mark can be used for promoting products or services to consumers, showcasing an organisation's action to address climate change or for other marketing purposes. It can only be used by certified participants of the Carbon Neutral Program.

Requirements for participation in the Carbon Neutral Program are set out in the *Carbon Neutral Program Guidelines* which are based on the requirements of the Standard. The Guidelines also provide useful information for entities implementing the Standard for self declaration. The Guidelines are available from the Department's website at:

www.environment.gov.au/climate-change/carbon-neutral/carbon-neutral-program.

This revision of the Standard was prepared following the 2015 Review of the Standard and the Carbon Neutral Program. The purpose of the Review was to align the Standard and the Carbon Neutral Program with current Government policy, to ensure they continue to meet industry needs and to streamline rules and procedures. This Version 3.0 of the Standard incorporates outcomes from the review.

1.2. Objective of the Standard

The objective of the National Carbon Offset Standard is to provide a benchmark for organisations in Australia voluntarily seeking to be carbon neutral for their operations, products, services and events.

A key element of a carbon neutral claim is consumer confidence in the validity of the claim. The Standard and the Carbon Neutral Program have been designed to provide consumers with transparent information on the actions taken by businesses and other organisations to achieve carbon neutral status for their activities, products, services or events. When a consumer is confident that a carbon neutral claim is backed by credible greenhouse gas measurement techniques, efforts to reduce emissions and genuine offsets, they will be more likely to use such claims to inform their purchasing decisions. This in turn encourages more businesses to reduce and offset their emissions, thereby lowering global greenhouse gas emissions.

To be carbon neutral means that the net emissions associated with an organisation's activities are equal to zero. For an entity to make a defensible carbon neutral claim in accordance with the Standard, it must:

- (1) measure its carbon account (also known as its carbon footprint);
- (2) reduce emissions where possible;
- (3) offset any residual emissions;
- (4) have its carbon account independently audited; and
- (5) publicly report key information about the carbon neutral claim.

This Standard sets out a framework to meet each of the above aspects. The Standard is designed to support carbon neutral claims relating to organisations, products, services or events. Further information may be provided in the future to support other categories to which a carbon neutral claim could be applied.

1.3. Applying the Standard

Where an organisation chooses to claim carbon neutrality against this voluntary standard, it must be applied consistently and fully.

The Standard provides a set of requirements for a claim of carbon neutrality. Organisations may wish to go further than prescribed in some instances. For example, the Standard includes minimum requirements for offsetting emissions. Some organisations may choose to cancel an additional amount of offset units as part of their corporate strategy.

Where the Standard is being used as the basis of a self-declaration of carbon neutrality (that is, the claim has not been independently verified, such as through the Carbon Neutral Program), the claimant must fully disclose and provide transparency as to the actions behind the carbon neutral claim. This allows the public to develop an informed opinion on the validity of the claim.

The Standard is also the basis for certification under the Carbon Neutral Program. Further details and the requirements for participating in the Carbon Neutral Program can be found in the Carbon Neutral Program Guidelines, available at: www.environment.gov.au/climate-change/carbon-neutral/carbon-neutral-program.

Throughout the Standard, the term “must” is used to clarify what is required to make a carbon neutral claim in accordance with the Standard. The terms “can” or “may” are used where an organisation is able to apply its own discretion or choose from several options, all of which are acceptable under the Standard. The term “should” is used to indicate a recommendation by the Department, in line with best practice.

Any reference to emissions abatement should also be considered to refer to greenhouse gas removals from the atmosphere where applicable.

1.4. Reference resources

The following existing Australian and international standards and Australian legislation provide the basis for the Standard. These documents also provide further detailed information on how to develop a carbon account.

- Australian Standard (AS) ISO 14064 series, including:
 - *AS ISO 14064 Greenhouse gases Part 1: Specification with guidance at the organisation level for the quantification and reporting of greenhouse gas emissions and removals* (AS ISO 14064.1:2006)

- *AS ISO 14064 Greenhouse gases Part 2: Specification with guidance at the project level for quantification and reporting of greenhouse gas emission reductions and removal enhancements (AS ISO 14064.2:2006)*
- *AS ISO 14064 Greenhouse gases Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions (AS ISO 14064.3:2006)*
- International Standard ISO 14040 series, including:
 - *ISO 14040: Environmental management – Life cycle assessment – Principles and frameworks (ISO 14040:2006)*
 - *ISO 14044: Environmental management – Life cycle assessment – Requirements and guidelines (ISO 14044:2006)*
 - Other international standards that are based on the ISO 14040 series, including *PAS 2050:2011 – Specification for the assessment of the life cycle greenhouse gas emissions of goods and services*
- International Standard *ISO 14065: Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation of other forms of recognition (ISO 14065:2013)*
- The British Standards Institution’s *PAS 2060:2014 – Specification for the demonstration of carbon neutrality*
- The Greenhouse Gas (GHG) Protocol standards, including:
 - *GHG Protocol – A corporate accounting and reporting standard (GHG Corporate Standard)*
 - *The GHG Protocol for Project Accounting*
 - *GHG Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)*
 - *GHG Protocol – Product Life Cycle Accounting and Reporting Standard (2011)*
 - *GHG Protocol – Scope 2 Guidance*
- The *National Greenhouse and Energy Reporting Act 2007 (NGER Act)* and supporting legislation and documentation, including:
 - *National Greenhouse and Energy Reporting Regulations 2008*
 - *National Greenhouse and Energy Reporting (Measurement) Determination 2008*
 - *National Greenhouse and Energy Reporting (Audit) Determination 2009*
 - *National Greenhouse and Energy Reporting Technical Guidelines*
 - *National Greenhouse Accounts Factors*

All standards and legislation are subject to revision. Responsible entities must use the most recent version or editions of any listed standards, guidance material or legislation.

2. ACHIEVING CARBON NEUTRALITY

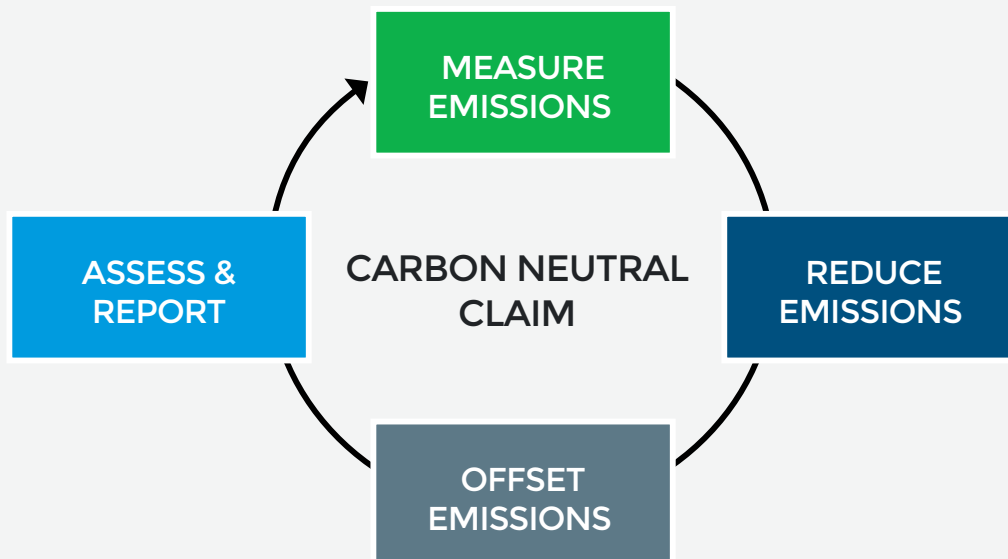
The carbon account of an organisation, product, service or event can be measured for many different reasons. When greenhouse gas emissions are measured and reported, they are generally better managed.

To make a valid and credible claim of carbon neutrality against the Standard, the entity responsible for making the claim must:

- Measure the carbon account of the activity to be claimed as carbon neutral (organisation, product, service or event);
- Monitor and reduce emissions where possible;
- Purchase and cancel eligible offset units to offset the remaining emissions; and
- Transparently report the steps taken so that consumers can objectively assess the carbon neutral claim.

Each of these steps must be completed annually, to support the validity and transparency of the carbon neutral claim.

Measures undertaken under this Standard only need to address the greenhouse gas emissions attributable to the subject of the carbon neutral claim. Other environmental impacts of the organisation, product, service or event do not need to be assessed for the purposes of this Standard.



3. MEASURING EMISSIONS

3.1. Carbon accounting principles

To achieve carbon neutrality under the Standard, the carbon account of an organisation, product, service or event must be calculated in accordance with the following principles. These principles are based on those outlined in the GHG Protocol and are consistent with those outlined under other relevant Australian legislation and international standards, including the AS ISO 14064 and ISO 14040 series.

- **Relevance:** Ensure the greenhouse gas inventory or the carbon life cycle assessment, as applicable, of an organisation, a product, service or event, appropriately reflects the greenhouse gas emissions attributable to that organisation, product, service or event and serves the decision-making needs of users – both internal and external.
- **Completeness:** Account for and report all greenhouse gas emissions sources and activities within the defined boundary of the organisation, product, service or event. Disclose and justify all exclusions.
- **Consistency:** Use consistent methodologies to allow for meaningful comparisons of greenhouse gas emissions over time. Transparently document any changes to the data, boundary, methods, or any other relevant factors in the time series.
- **Transparency:** Greenhouse gas information must be compiled, analysed and documented clearly and coherently so that auditors and the public may evaluate its credibility. Disclose any relevant assumptions and make appropriate references to the calculation methodologies and data sources used.
- **Accuracy:** Ensure that the quantification of greenhouse gas emissions is unbiased (not systematically over or under actual emissions) and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information. Where uncertainty is high, use conservative values and assumptions.

3.2. Overview of carbon account calculations

Calculating a carbon account involves the following key processes:

- establishing the emissions boundary;
- identifying greenhouse gas emissions sources within the boundary;
- collecting data relevant to identified emissions sources, and calculating the greenhouse gas emissions attributable to the organisation, product, service or event using emissions factors and approved methodologies; and
- setting a base year to allow comparison over time.

There are two commonly accepted approaches for developing a carbon account: the greenhouse gas inventory approach and the life cycle assessment (LCA) approach. The Standard requires that the carbon account:

- of an organisation should be developed using the greenhouse gas inventory approach, with the emissions boundary of the organisation defined using the equity share or control approach. An organisation may however choose to use the LCA approach where its emissions are largely defined by a single product.
- for a product or service must be developed using the LCA approach.
- For an event should be developed using the LCA approach.

However, the greenhouse gas inventory approach or other carbon accounting approaches may also be used. The choice of the most appropriate calculation approach will depend on the type of event and will need to be made on a case by case basis.

Further information about each of these approaches is in sections 3.3 and 3.4 respectively. See also section 3.6 for information on technical issues applicable to all carbon account calculations.

3.3. Calculating a greenhouse gas inventory: Carbon account for an organisation

3.3.1. Establishing an organisational emissions boundary

The emissions boundary of an organisation establishes the entities and activities that the organisation includes in its carbon account. The responsible entity must account for the greenhouse gas emissions attributable to the whole organisation. The organisational emissions boundary must be transparently documented and disclosed along with the reasoning for choosing the boundary. Where the chosen boundary does not represent the full activities or the most emissions intensive activities of the organisation, this must be disclosed and justified.

If applying the Standard to achieve certification under the Carbon Neutral Program, specific requirements around boundaries and categories of certification apply. Further information can be found in the *Carbon Neutral Program Guidelines*.

For organisations that report under the National Greenhouse and Energy Reporting (NGER) Scheme, section 8 of the NGER Act defines a corporate group as the controlling corporation and its subsidiaries. Organisations that do not report under NGERs or that do but for carbon neutral purposes wish to include other organisational structures within their carbon account, should refer to chapter 3 of the GHG Corporate Standard. This provides guidance on approaches to establishing an organisational emissions boundary.

The GHG Corporate Standard outlines two main approaches:

- (1) the equity share approach, which requires an organisation to account for greenhouse gas emissions from operations according to its share of equity in the activities; and
- (2) the control approach, which requires an organisation to account for 100 per cent of the greenhouse gas emissions from operations over which it has control. This can be based on either financial or operational control. The organisation would not need to account for greenhouse gas emissions from operations in which it owns an interest but over which it has no control.

Consistent decision making processes for establishing an organisational emissions boundary must be used throughout all levels of an organisation.

Where an organisation identifies an emissions source as being outside the scope of its emissions boundary but which might otherwise reasonably be expected to be within the emissions boundary, the exclusion must be clearly stated, and the reasons for and implications of the exclusion must be justified.

3.3.2. Identifying emissions sources within the organisational emissions boundary

Once an organisational emissions boundary has been established, the Scope 1, 2 and 3 emissions sources from the activities within that boundary must be identified.

Scope 1 emissions include all direct greenhouse gas emissions from sources that are owned or controlled by the organisation, for example emissions from fuel use, refrigerants and electricity generation.

Scope 2 emissions include purchased electricity, heat and steam.

Scope 3 emissions are all indirect emissions that occur as a consequence of the activities of the organisation, but occur from sources not owned or controlled by the organisation. The responsible entity may use the following categories of Scope 3 emissions sources as guidance for identifying emissions activities:

- Purchased goods and services
- Capital goods
- Fuel- and energy-related activities (not included in Scope 1 or Scope 2)
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Upstream leased assets
- Downstream transportation and distribution
- Processing of sold products
- Use of sold products
- End-of-life treatment of sold products
- Downstream leased assets
- Franchises
- Investments.

Source: *GHG Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard*

3.3.3. Collecting data and calculating emissions

Once the emissions boundary and emissions sources have been identified, the responsible entity must determine the most appropriate approach for calculating the carbon account and consider the types of data available for different emissions sources.

For example, the responsible entity may calculate emissions from paper use based on the amount of money spent on paper, the weight of the paper or the number of reams consumed. The responsible entity

should consider what methodologies and emissions factors are available, and choose the type of data based on the expected accuracy of the results and the ease of calculation. Consideration should be given to whether the data would need to be converted and if so how many times this would need to be done, as this would likely decrease the accuracy of the carbon account. For example, if the chosen emissions factor relates to weight of product consumed but the only available data is financial data, the responsible entity would need to find a means to convert its data from financial to weight-based. This conversion could decrease the accuracy of the final figures.

When considering calculating the emissions from identified sources, the responsible entity must use its best endeavours to meet the carbon accounting principles of relevance, completeness, consistency, transparency and accuracy (see section 3.1).

Any Scope 1 and 2 emissions estimated to be material in accordance with section 3.6.5. must be quantified.

Any Scope 3 emissions source that is identified as relevant to the organisation must also be quantified. This will enable the responsible entity to identify opportunities for emissions reductions across its corporate value chain. The Standard is aligned with the GHG Protocol which specifies that Scope 3 emissions sources are relevant in the following circumstances:

- the Scope 3 emissions from a particular source are likely to be large relative to the organisation's Scope 1 and Scope 2 emissions;
- the Scope 3 emissions from a particular source contribute to the organisation's greenhouse gas risk exposure;
- the Scope 3 emissions from a particular source are deemed relevant by key stakeholders;
- the organisation has the potential to influence the reduction of Scope 3 emissions from a particular source; and/or
- the Scope 3 emissions are from outsourced activities that were previously performed in-house or from activities outsourced by the responsible entity that are typically performed in-house by other companies in the same sector as the responsible entity.

Where a Scope 3 emissions source is deemed relevant and estimated to be material, but accurate data is not yet available, a plan should be put in place and implemented to acquire the necessary data for future reporting periods.

3.3.4. Disclosing emissions not quantified

According to the principle of completeness, all relevant emissions sources within the emissions boundary must be accounted for, so that a comprehensive and meaningful carbon account is compiled.

Where the responsible entity does not quantify an individual emissions source that is:

- within the organisational emissions boundary;
- a relevant Scope 3 emission; or
- a material Scope 3 emission

this must be disclosed and justified. When making any assertions about emissions reductions, the responsible entity should explain in this context what emissions have been included and what has been excluded (such as exclusions on the basis of the materiality threshold – see section 3.6.5). This is in addition to the disclosure and justification of activities considered to be outside the emissions boundary.

3.4. Undertaking a Life Cycle Assessment: Carbon account for a product or service

The ISO 14040 series of standards provides the general framework, principles and requirements for conducting and reporting an LCA study. These standards deal with all the resource impacts of a product or service including the use of water, raw materials (such as metals or fibres) and energy.

An LCA prepared for the purposes of meeting this Standard should be based on the ISO 14040 series but need only determine the greenhouse gas emissions attributable to the subject of the carbon neutral claim. Other environmental impacts do not need to be assessed.

3.4.1. Establishing a system boundary

The scope of an LCA report must include a description of:

- the product or service and its function;
- the functional unit;
- all assumptions made in the LCA; and
- the measurable parameters and system boundary of the product or service over its entire life cycle.

The system boundary is best displayed as a flow chart (for example figure 2, ISO 14040:2006).

The responsible entity must incorporate all relevant stages of the life cycle of the product or service in the LCA system boundary. Any decision to exclude life cycle stages, processes, inputs or outputs must be clearly stated, and the reasons for and implications of the exclusion must be justified.

Chapters 6 and 7 of the *GHG Protocol – Product Life Cycle Accounting and Reporting Standard* provide further guidance on functional units, boundary setting and the potential for excluding life cycle stages, processes, inputs or outputs from an LCA system boundary.

3.4.2. Identifying emissions sources within the system boundary

The responsible entity must identify direct and indirect greenhouse gas emissions within the system boundary of the product or service, including the relevant stages of a product or service's life cycle. This may include emissions resulting from:

- the transformation, production, processing and acquisition of raw materials;
- manufacture, production and final assembly;
- the operation of premises;
- all methods of transport;
- warehousing and sales;
- services that form an integral part of distribution and supply;
- the operation and maintenance of the product or service; and
- the reuse, recycling or final disposal of the product.

The LCA of an imported or exported product or service must accurately reflect its embodied emissions, including international freight or travel and any other lifecycle stages.

3.4.3. Collecting data and calculating emissions

An LCA report must include a lifecycle inventory analysis which provides the following information:

- data sources, collection procedures and calculation methodologies used to quantify the greenhouse gas emissions associated with inputs and outputs to each life cycle stage of a product or service;
- reference units for all inputs and outputs for each life cycle stage, for example, litre of fuel, unit of gas or electricity;
- the chosen functional unit for the product or service, for example kilograms of carbon dioxide equivalent emissions per unit of product or service;
- what the data includes and what production delivery inputs are considered, for example whether start-up/shutdown and emergency conditions are included;
- whether there are relevant local or regional variations associated with the calculated greenhouse gas emissions;
- the allocation of greenhouse gas emissions amongst products that share a production delivery platform or services that share facilities or corporate overheads;
- the period during which the information and data has been collected;
- the significance of any exclusions or assumptions, and
- information sources.

The responsible entity must apply the data collection and calculation approaches set out in the life cycle inventory analysis to calculate the greenhouse gas emissions attributable to each stage of the life cycle of the product or service. Results must be expressed in the chosen functional unit.

Collectively, the greenhouse gas emissions attributable to each stage of the life cycle will provide an estimate of the emissions attributable to the full life cycle of the product or service.

3.5. Carbon account for an event

The carbon account of an event should in most cases be calculated using the LCA approach. However, the greenhouse gas inventory approach (including relevant Scope 3 emissions) may also be used. The choice of the most appropriate calculation approach will depend on the type of event and will need to be made on a case by case basis.

The responsible entity must prepare an LCA or greenhouse gas emissions inventory report that contains the following components:

- the event emissions boundary;
- greenhouse gas emissions sources within the event emissions boundary;
- greenhouse gas emission factors and calculation methodologies;

- activity and emissions data collected if inventory analysis;
- any assumptions;
- any exclusions and their justification; and
- final calculated greenhouse gas emissions attributable to the event within the boundary.

The general processes set out under sections 3.3 or 3.4 may be used as guidance. The responsible entity should also refer to section 3.6 on topics common to both the inventory and LCA approaches.

3.5.1. Establishing an event emissions boundary

The emissions boundary of an event defines the activities that the responsible entity must include in the carbon account calculation for the event. Emissions that must be included are those that:

- are under control or influence of the responsible entity;
- are owned or shared by the responsible entity;
- occur as a consequence of the event (associated emissions), where it is possible to reasonably estimate these emissions; and/or
- are of high stakeholder interest.

The treatment of some associated emissions may vary subject to the nature of the event. In all cases, the event emissions boundary chosen must be transparently documented and disclosed when making assertions relating to the achievement of carbon neutrality in relation to the event.

3.5.2. Determining event baselines

A pre-event baseline of expected emissions must be set against which potential emission reductions activities can be compared. As per the requirements for organisations, services or products, the pre-event baseline must inform the quantity of eligible offset units cancelled prior to the event, in order to maintain the integrity of the carbon neutral claim (see section 5.3). It must also be subject to an independent audit (see section 6.2).

For a non-recurring event, the pre-event baseline must be based on the carbon account of a previous or similar event.

For a recurring event, the initial carbon account must form the baseline for future events. This enables the comparison of emission reductions over time. If data for a previous event is unavailable, the initial carbon account may be based on the carbon account of a similar event.

If there is any material change to the event in subsequent years (for example if the location, size or activities of the event change substantially) these must be clearly documented. The responsible entity must consider whether to recalculate the base year emissions in such cases.

3.6. Requirements applicable to all carbon account calculations

3.6.1. Setting a base year and base year recalculation policy

Setting a base year allows emissions to be accurately compared over time. This in turn provides transparency as to the success and magnitude of emissions reduction efforts. To establish a base year: Select the earliest relevant historical year for which verifiable carbon emissions and removals data are available, or use a multi-year average where a single year's data is unrepresentative of the activity's typical emissions profile.

- Explain the selection of the base year.
- Document base year calculations in subsequent carbon accounts.

A base year recalculation policy enables like for like comparisons of emissions over time. A base year recalculation policy must account for changes to:

- operational boundaries;
- ownership and control of greenhouse gas sources and sinks; and
- quantification methodologies that result in significant changes to greenhouse gas emissions or removals.

The base year recalculation policy must include a quantitative 'significance threshold', beyond which a base year recalculation would be triggered, and an approach to deal with significant errors discovered over time.

Chapter 5 of the GHG Corporate Standard provides additional guidance on base year recalculation approaches.

3.6.2. Gases

Emissions from carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro-fluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆) must be included in the carbon account.

3.6.3. Emissions factors

An organisation must use credible and reliable emission factors and calculation tools when determining its carbon account. Where a factor is available in *the National Greenhouse Gas Accounts* that is applicable to the responsible entity's circumstances, this factor must be used. Factors used should align with the relevant time period during which the emissions occurred (for example, a 2014 emissions factor should be used to calculate 2014 emissions).

3.6.4. NGERs reporters

Where an organisation reports its emissions under the NGER Act, and has chosen to apply the same emissions boundary for carbon neutral accounting purposes, it should use the same methods for calculating Scope 1 and Scope 2 emissions as it uses for reporting under the NGER Act.

Where an organisation reports under the NGER Act but chooses to apply a different emissions boundary, it may still use the same methods for calculating Scope 1 and Scope 2 emissions as it uses for reporting under the NGER Act. It may also use guidance provided by the NGER Act or this Standard for quantifying small emissions sources and Scope 3 sources.

3.6.5. Materiality threshold

Any emissions source (including Scope 3 emissions sources identified as relevant) estimated to be material, that is, more than one per cent of the total carbon account, must be quantified unless evidence can be provided to demonstrate that such quantification would not be technically feasible, practicable or cost effective relative to its significance.

An emissions source estimated to constitute less than one per cent of the total carbon account is not required to be quantified on that basis alone. This is the materiality threshold under the Standard.

In applying the materiality threshold across all emissions sources, the total amount of emissions excluded (not quantified) must not exceed five per cent of the total carbon account.

The responsible entity is however encouraged to include, measure and report as many relevant emissions sources as possible. Alternative approaches to the exclusion (non-quantification) of under the one per cent materiality threshold include:

- taking an initial measurement of an emissions source as a basis for projecting future emissions from that source; or
- estimating and projecting the emissions from an emissions source.

3.6.6. Uncertainty

Where an organisation is required under the NGER Scheme to estimate uncertainty associated with its Scope 1 emissions, the organisation must also include this uncertainty estimate in its reporting under the Standard for transparency purposes. Where an organisation is not required to estimate the uncertainty associated with its Scope 1 emissions under the NGER Scheme, even if it is required to report under that Scheme, there is no requirement to report or estimate uncertainty for the purpose of this Standard.

4. REDUCING EMISSIONS

Maintaining a comprehensive carbon account can help an organisation to better understand its sources of greenhouse gas emissions and to identify the most cost-effective opportunities for reducing emissions. Once a carbon account has been measured, reductions in emissions can be calculated by comparing changes in the carbon account over time relative to a base year.

An entity wishing to become carbon neutral must develop and maintain an emissions reduction strategy. The emissions reduction strategy must identify the emissions reduction measures to be undertaken and the quantity of emissions expected to be reduced over a specified timeframe.

In some cases, it may not be possible or practicable to achieve emission reductions every year. Nevertheless, the responsible entity should aim to achieve emission reductions wherever possible and cost effective.

The emissions reduction strategy should be made publicly available, along with details of any activities leading to emission reductions that have been achieved or have commenced over the relevant reporting period.

5. OFFSETTING EMISSIONS

The entity responsible for a carbon neutral claim against this Standard must ensure any residual emissions are offset each year. This is done by cancelling (also known as retiring) in a publicly available registry the equivalent number of eligible units to offset the emissions associated with the carbon neutral organisation, product, service or event.

Before choosing to use any units for offsetting purposes, the responsible entity should undertake its own due diligence assessment of the originating projects and underpinning methodologies.

5.1. Offsets integrity principles

For an offset unit to be eligible for use under the Standard, it must meet the integrity principles below. These principles are based on the offsets integrity framework for Australian Carbon Credit Units (ACCUs) as set out in the *Carbon Credits (Carbon Farming Initiative) Act 2011*. The offsets integrity principles ensure that any unit used to offset emissions as part of a carbon neutral claim under this Standard represents a genuine and credible emission reduction.

In order for a unit to be eligible for use under the Standard it must meet the following requirements:

- **Additional:** It must result in emissions reductions that are unlikely to occur in the ordinary course of events, including due to any existing commitment or target publicly agreed by the entity responsible for issuing the units. It must represent abatement that has not been double counted.
- **Permanent:** It must represent permanent reductions in greenhouse gas emissions. In the case of sinks, this requires that the carbon stored is sequestered and will not be released into the atmosphere for a period of 100 years. Where a period of less than 100 years is applied to sequestration units, an appropriate discount must be applied.
- **Measurable:** Methods used to quantify the amount of emissions reductions generated must be supported by clear and convincing evidence.
- **Transparent:** Consumers and other interested stakeholders must have access to information about the offset project that generated the abatement, including the applied methodology and project monitoring arrangements.
- **Address leakage:** The system responsible for generating the offset unit must provide deductions for any material increases in emissions elsewhere which nullify or reduce the abatement that would otherwise be represented by the offset unit.
- **Independently audited:** The circumstances responsible for the generation of the unit must be verified by an independent, appropriately qualified third party and not found to be in contradiction with these integrity principles.
- **Registered:** The offset unit must be listed and tracked in a publicly transparent registry.

A decision framework based on these offsets integrity principles is used to determine the eligibility of offset units under the Standard.

5.2. Offset units eligible for use under the Standard

All Australian carbon credit units (ACCUs) issued by the Clean Energy Regulator in accordance with the framework established by the *Carbon Credits (Carbon Farming Initiative) Act 2011* are eligible for use under the Standard. Selected international units are also eligible for use.

A list of all offset units eligible for use under the Standard is at **Appendix A**.

Appendix A will be updated from time to time as new information or new offset units become available. This may result in the addition of new offset units, or the removal of existing ones.

5.3. When to offset

At the start of each year for which a carbon neutral claim is intended to be made, the responsible entity must purchase and cancel a quantity of eligible offset units. That quantity of units must be equal to or greater than the estimated total emissions associated with the organisation, product, service or event that is the subject of the carbon neutral claim for the ensuing year. The cancellation of eligible offset units at the start of each year gives validity to any claim of carbon neutrality made during that year.

At the end of the year in question, the responsible entity must compare the amount of eligible offset units cancelled at the start of the year with the carbon account that is included in the annual public report for that year (see section 6.3).

- Where the final reported carbon account for the year is greater than the quantity of eligible offset units already cancelled for that year, the responsible entity must perform a 'true-up' cancellation of additional eligible offset units to ensure the full carbon account has been offset.
- Where the final carbon account shows that excess eligible offset units have already been cancelled for the year in question, this excess may be carried forward or 'banked' for use in future years.

This forward cancellation and true-up process must be performed for each year for which a carbon neutral claim is made.

The responsible entity should develop and maintain a strategy for purchasing and cancelling eligible offset units for each year that is the subject of a claim of carbon neutrality. This strategy may include decisions regarding the types of offset units to be purchased.

Eligible offset units may be purchased for immediate use or they may be banked for future use. Early purchase and/or cancellation of units allows the responsible entity to choose the timing of purchase to meet business needs, and to obtain a particular type of offset when it is available.

6. ASSESSING AND REPORTING

6.1. Data management

The responsible entity must demonstrate that appropriate systems are in place to monitor the greenhouse gas emissions associated with the organisation, product, service or event.

The quality of data is key to the integrity of a carbon account. Quality control practices should be in place to ensure a high level of data quality. Assessing data quality during data collection allows the responsible entity to make data quality improvements more efficiently than when data quality is assessed after the collection is complete.

The data required to create a carbon account, and the processes for establishing and maintaining those records, should be identified to ensure that the greenhouse gas emissions attributable to the subject of the carbon neutral claim, and any changes in these emissions, are recorded in a timely manner.

Key internal and external stakeholders should be engaged in managing and delivering various elements of the information that make up a carbon account and a carbon neutral claim. This includes the processes for selecting and appointing an independent auditor to audit the records related to the carbon neutral claim.

Changes in the greenhouse gas emissions attributable to the organisation, product, service or event must be identified and recorded for auditability purposes (see section 6.2 for further information on audits). The responsible entity must ensure the existence, quality and retention of documentation in order to enable the creation of an audit trail of how the carbon account was created.

The responsible entity may develop a data management plan, to ensure the collection of high quality carbon account data and the improvement of data collection procedures. A data management plan is a tool to help the responsible entity organise and consistently document the data collection process, including sources of data, assumptions made, and data quality. Documenting the data collection process is useful for improving data quality over time, preparing for audit, and revising future carbon accounts to reflect changes in the attributable emissions.

6.2. Auditing

A considered and transparent audit model provides confidence in carbon neutral reporting. Independent auditing validates the accuracy and completeness of carbon calculations including the adequacy of emissions boundaries, methodologies and factors.

Carbon account calculations, reductions and offsetting activities must be reported and independently audited on a regular basis. A carbon neutral claim under the Standard must be subject to an independent Auditing at least once every two years. The independent auditor's report and/or assurance statement must be made publicly available.

An entity making a carbon neutral claim is responsible for maintaining appropriate records for auditing and bearing the associated costs.

Audit standards that should be applied are:

- ASAE 3000 *Assurance Engagements other than Audits or Reviews of Historical Financial Information*; or
- ISO 14064-3:2006 *Greenhouse gas specification with guidance for the validation and verification of greenhouse gas assertions*.

If another auditing standard is to be applied, the auditor must confirm that it is as rigorous as those specified above.

An auditor must provide an assurance statement confirming whether the carbon account and other information relevant to the carbon neutral claim are presented fairly in accordance with the requirements of this Standard. The level of assurance achieved must be a reasonable level of assurance for Scope 1 and 2 emissions, and a limited level of assurance for Scope 3 emissions.

An audit of a carbon neutral claim under this Standard must be undertaken by a suitably qualified auditor. Suitably qualified auditors are individuals or bodies that:

- are included on the Register of Greenhouse and Energy Auditors, as established under section 75A of the NGER Act and maintained by the Clean Energy Regulator; or
- are accredited to the international standard ISO 14065:2013 or recognised international standards based on ISO 14040.

Where specialist skills are required that are not possessed by the auditor, the necessary skills can be provided by an independent expert (in line with AS ISO 14064.3 or the Clean Energy Regulator's *Audit Determination Handbook*). Such experts must be independent and cannot have been involved in the development of the carbon account that is the subject of the audit.

6.3. Reporting

An annual report must be made publicly available on the responsible entity's website to communicate progress on emissions reduction activities and offsetting against a carbon neutral claim. Annual reporting keeps consumers and other interested parties informed in an open and transparent manner, and communicates achievements in managing emissions.

The annual public report must include the following:

- The total gross and net greenhouse gas emissions of the activity for the base year and current reporting period, taking into account any renewable energy and carbon neutral purchases;
- A statement on the emissions reduction activities undertaken in accordance with the emissions reduction strategy and the resulting quantity of emissions reduced (where this is able to be quantified); and
- Details of the quantity and type of offset units cancelled and records to prove that sufficient offset units have been cancelled to offset the carbon emissions associated with the activity (for example the name of the registry in which the units were cancelled and the serial numbers of the relevant units).

Reporting for a non-recurring event should be completed as soon as possible after the completion of the event. Reporting for a recurring event must be done on an annual basis at a minimum through a public report as detailed above.

6.4. Guidance on making carbon neutral claims

When making a carbon neutral claim under this Standard, the responsible entity must be mindful of its obligations under Australian Consumer Law.

Australian Consumer Law applies to all forms of marketing, including claims on packaging, labelling and in advertising and promotions across all media (print, TV, radio and internet).

Consumers are entitled to rely on any carbon neutral claim made in reference to this Standard and expect these claims to be truthful. The responsible entity must ensure that any claim made regarding compliance with this Standard is accurate and appropriately substantiated.

The Australian Government has registered a National Carbon Offset Standard certification trade mark which can be used under licence to market an organisation, product, service or event as carbon neutral in compliance with the Standard.

This certification trade mark is available for use only by an organisation, product, service or event that is certified under the Carbon Neutral Program. Further information can be found in the *Carbon Neutral Program Guidelines*, available at:

www.environment.gov.au/climate-change/carbon-neutral/carbon-neutral-program.

GLOSSARY

Additionality: A requirement that a project or activity results in carbon abatement that is unlikely to occur in the ordinary course of events in the absence of the project or activity, including due to any existing commitment or target publicly agreed by the entity responsible for issuing the units. Abatement must not be double counted under another system.

Australian Carbon Credit Unit (ACCU): An emissions unit issued under the *Carbon Credits (Carbon Farming Initiative) Act 2011*.

Cancellation: Transfer of a unit to a cancellation account so that it may not be used for any further purpose. Also known in some schemes as 'retirement'.

Carbon account: A measure of the carbon dioxide equivalent emissions attributable to an activity. A carbon account can relate to the emissions of an individual, household, organisation, product, service or event. This can also be known as a carbon footprint.

Carbon dioxide equivalence (CO₂-e): A standard measure that takes account of the global warming potential of different greenhouse gases and expresses the effect in a common unit.

Carbon neutral: Refers to a situation where the net emissions associated with an organisation's activities, product, service or event are equal to zero because the organisation has reduced its emissions, and acquired and cancelled offset units to fully account for its remaining emissions.

Carbon sink: A natural or manmade reservoir, such as a forest, that stores carbon.

Certified Emission Reduction (CER): A Kyoto Protocol unit corresponding to one metric tonne of carbon dioxide equivalent emissions, and issued for verified emission reductions or removals achieved by a project approved under the Clean Development Mechanism (CDM). CDM projects undertaking afforestation and reforestation activities are issued temporary (tCERs) and long term units (lCERs), which expire and must be replaced after a specified period.

Clean Development Mechanism (CDM): A carbon offset mechanism established under Article 12 of the Kyoto Protocol. Countries with emissions targets under the Kyoto Protocol can meet their obligations using credits from greenhouse gas abatement projects established under Article 12 in countries that are Party to the Protocol but do not have an emission target.

Emission factor: A factor that specifies the kilograms of CO₂-e emissions per unit of activity.

Event: an occurrence, particularly one of importance. May occur regularly (e.g. annual conference or exhibition), periodically (e.g. fundraising event) or only once (e.g. concert, wedding or special sporting event),

Facility:

For any organisation already reporting under the NGER Act, means an activity or a series of activities (including ancillary activities) that involves the production of greenhouse gas emissions, the production of energy or the consumption of energy, and that forms a single undertaking or enterprise and meets the requirements of the National Greenhouse and Energy Reporting (NGER) Regulations.

For any organisation not currently reporting under the NGER Act, means any building or land together with any machinery, plant, appliance, equipment, implement, tool or other item used in connection with any activity carried out at the facility, and includes an offshore facility. The facility may be located on a single site or on adjacent or contiguous sites owned or operated by the same person.

Functional Unit: A means of expressing the greenhouse gas emissions of a product in a way that is meaningful for the product being investigated (for example kilograms of CO₂-e per unit of product).

Greenhouse gases (GHG): The atmospheric gases responsible for causing global warming and climate change. The Kyoto Protocol currently lists six greenhouse gases - carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro-fluorocarbons (HFCs), per-fluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

Kyoto Protocol: An international treaty which was created under the United Nations Framework Convention on Climate Change (UNFCCC) in 1997 and entered into force in 2005. The Kyoto Protocol sets binding targets for the reduction of greenhouse gas emissions by developed countries and countries in transition. It includes individual emission reduction targets for those countries ('Annex I countries') to be met within the first commitment period of 2008-12.

Kyoto unit: Emissions units created under the Kyoto Protocol. Kyoto units include Assigned Amount Units (AAUs), Certified Emission Reductions (CERs, including tCERs and ICERs), Emission Reduction Units (ERUs) and Removal Units (RMUs).

Life cycle assessment (LCA): The compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its production, use, transport and disposal (the product's "life cycle").

Limited Assurance: A level of assurance defined in the *National Greenhouse and Energy Reporting (Audit) Determination 2009* whereby the auditor finds that there is no evidence to suggest that a report is not accurate. This is a lower level of assurance than 'reasonable assurance'. Is distinguishable from a reasonable level assurance in that there is less emphasis on detailed testing of greenhouse gas data and information supplied to support the greenhouse gas assertion.

National Greenhouse and Energy Reporting (NGER) Scheme: The national reporting framework for information related to greenhouse gas emissions, energy production and use by corporations operating in Australia. The framework is established under Commonwealth legislation, which makes registration and reporting mandatory for corporations whose greenhouse gas emissions or energy production or use meet certain thresholds.

NGER Act: *National Greenhouse and Energy Reporting Act 2007*.

Offset unit: Represents reductions of greenhouse gases or removals of greenhouse gases from the atmosphere by sinks, relative to a business-as-usual baseline. Offset units are tradeable and can be used to negate (or offset) all or part of another entity's emissions.

Operational control: The highest authority within a corporate group to introduce and implement any or all of the following for the Facility: (i) operating policies; (ii) health and safety policies; (iii) environmental policies. Only one corporation can have operational control over a Facility at any time.

Organisation: A company, corporation, firm, enterprise, authority or institution, or a combination thereof, whether incorporated or not, public or private, that has its own functions and administration. This may also include an organisation that shares functions and/or administration with another organisation.

Permanence: A requirement that offset units represent reductions in emissions or an increase in carbon sequestration that is permanently maintained and is not re-released into the atmosphere.

Product: Physical goods produced for sale.

Reasonable Assurance: A level of assurance defined in the *National Greenhouse and Energy Reporting (Audit) Determination 2009* meaning that the report is accurate in all material respects. The auditor provides a high, but not absolute, level of assurance that the responsible party's greenhouse gas assertion is materially correct.

Removal Unit (RMU): A unit created under the Kyoto Protocol corresponding to one metric tonne of carbon dioxide equivalent emissions sequestered and issued for removals of carbon dioxide from the atmosphere by eligible land use, land-use change and forestry activities.

Scope 1 emissions: The release of greenhouse gas into the atmosphere as a direct result of activities at a facility.

Scope 2 emissions: The release of greenhouse gas as a result of electricity generation, heating, cooling or steam that is consumed by a facility.

Scope 3 emissions: Greenhouse gases emitted as a consequence of a facility's activities but emitted by another facility.

Sequestration: The removal of atmospheric carbon dioxide, either through biological processes (for example, photosynthesis in plants and trees), or geological processes (for example, storage of carbon dioxide in underground reservoirs).

Sink: See carbon sink.

(the) Standard: National Carbon Offset Standard.

Verified Carbon Unit (VCU): A unit corresponding to one metric tonne of carbon dioxide equivalent emissions reduced or avoided, as certified and issued under the Verified Carbon Standard.

Voluntary Emissions Reduction (VER): A unit corresponding to one metric tonne of carbon dioxide equivalent emissions reduced or avoided, as certified and issued under the Gold Standard, a global standard for abatement projects under the Kyoto Protocol and in the voluntary carbon market.

